DOI: 10.5152/TurkThoracJ.2019.385

[Abstract:0412] PP-313 [Accepted:Poster Presentation] [Respiratory System Infections]

Aspergillus Fumigatus Lung Involvement with Various Radiological Appearance: Case Series

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Introduction: Aspergillus species rarely cause disease in healthy individuals, but can cause severe lung problems in susceptible individuals. A.fumigatus is responsible for more than 90 percent of human aspergillus infections.

Case 1: 52-year-old male who had a 40 p/y smoking history with the complaints of hemoptysis, loss of appetite, sweating, and fatigue. The patient had mandibular tumor surgery 9 months ago and did not receive chemotherapy-radiotherapy. Physical examination revealed clubbing. On chest X-ray, infiltration was detected left lung upper zone localization that was not exist 1 year ago. Thorax tomography revealed an infiltration and an appearance consistent with fungus ball in the left upper lobe, sequela changes in the upper lobe of the right lung and fibrosis in the lower lobes of both lungs. Bronchoscopic examination was performed. No endobronchial lesion was observed. Acid-fast bacilli analysis of bronchial lavage was negative. Bronchial lavage galactomannan was evaluated as high positive (>6). The patient was treated with voriconazole for 6 months with the diagnosis of chronic cavitary pulmonary aspergillosis. Infiltration and aspergilloma regressed and the patient clinically improved. Open lung biopsy was performed with a preliminary diagnosis of interstitial lung disease. Pathology revealed usual interstitial pneumonia.

Case 2: 50 years old male patient, who had a history of pulmonary tuberculosis 8 years ago, present with fatigue and sweating. On chest X-ray, in the right upper lobe, a new developing heterogeneous density was observed on the sequelae. Thoracic tomography revealed a lesion consistent with aspergilloma. Bronchoscopic examination was performed. No endobronchial lesion was observed. As the clinical condition improved after antibiotherapy and there was no hemoptysis, the patient was decided to follow-up.

Case 3: 50 years old female patient, who had no complaints, was examined for the presence of a lesion on the chest radiograph for control. Bronchoscopy was performed because of aspergilloma in the cylindrical bronchiectatic structures in the superior segment of the lower lobe of the right lung on thoracic tomography. No endobronchial lesion was observed. Bronchial lavage galactomannan was evaluated as high positive (>6). Right lower lobectomy was performed. Pathology diagnosis was reported as bronchiectasis and fungus ball formation. Case 4:55 years old male admitted to ward with the complaints of cough and sweating for the past 3 months. Tomography revealed that, RUL 42x25 mm and 25x25 mm, RLB 17x15 mm periperally calcified nodul, LUB 29x21 mm cavitated nodul. Nodulles were ametabolic on PET-CT. Bronchoscopic examination was performed. No endobronchial lesion was observed. Acid-fast bacilli analysis of bronchial lavage was negative. Bronchial lavage galactomannan was evaluated as positive. The patient was treated with voriconazole 400 mg/day. The treatment was changed to itracanozole due to hepatotoxicity with voricanozole.The patient is still being followed.

Conclusion: Aspergillus infections can be observed with different clinical and radiological views.

Keywords: Aspergillus, lung infections, pneumoniae